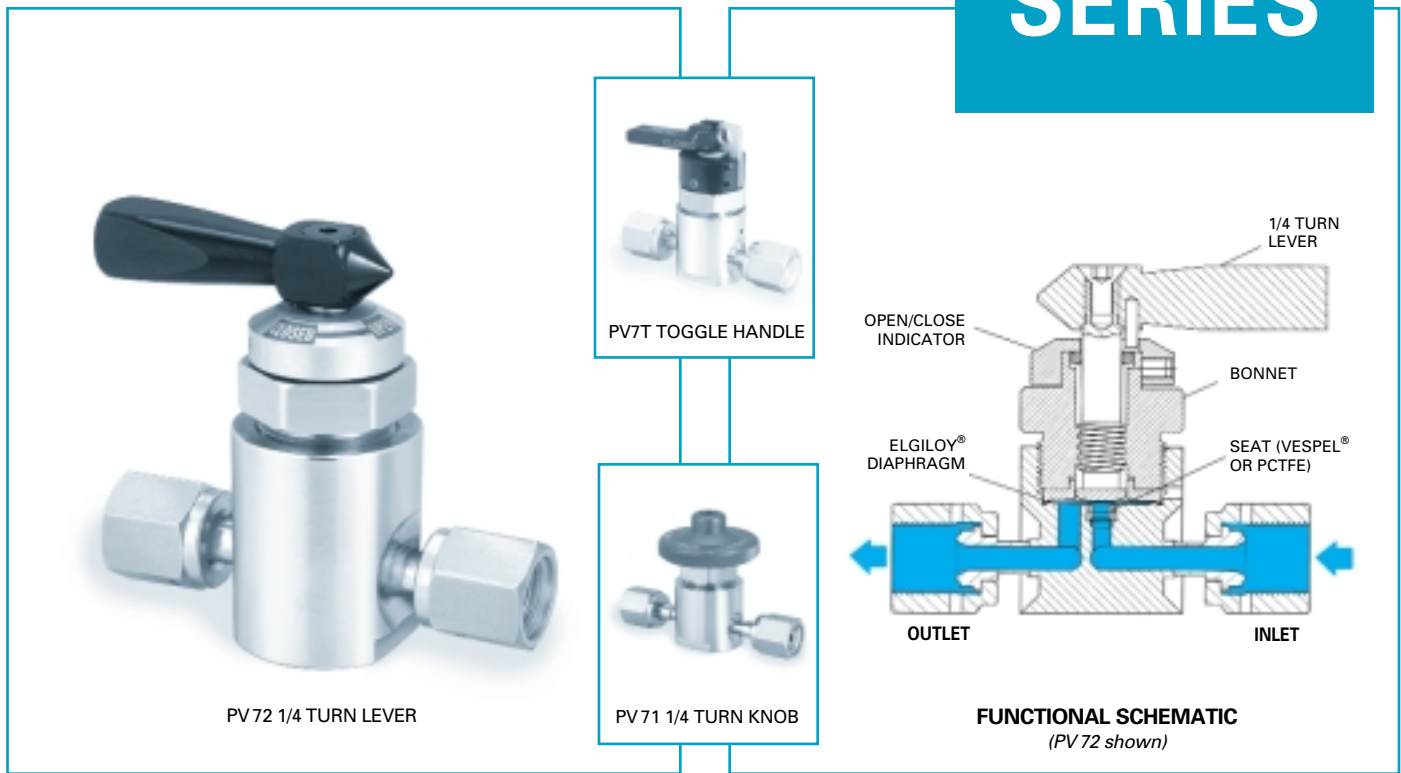


ULTRA-HIGH PURITY DIAPHRAGM VALVES

PV 70 SERIES



PV 72 1/4 TURN LEVER

PV7T TOGGLE HANDLE

PV 71 1/4 TURN KNOB

FUNCTIONAL SCHEMATIC
(PV 72 shown)

VALVES OPEN UNDER VACUUM • NO SPRINGS • HIGH FLOW OPTION

Designed for very low particle generation and entrapment, PV 70 Series Diaphragm Valves open under all vacuum conditions and feature 5 Ra or 10 Ra microinch internal surface finishes. Metal-to-metal diaphragm seals provide enhanced leak integrity and a low internal volume of 1.2 cc allows efficient purging. All springs, a potential source of particles, have been removed from the flow stream.

Media contact parts are 316L VAR, 316L Stainless Steel, Vespel® or PCTFE and Elgiloy®. PV 70 valves are available with Tescom's Precision Electro-Polish (P.E.P) process to enhance internal surface chemistry. Design maximum inboard leak rate across the seat is less than 4×10^{-9} atm cc/sec He and less than 1×10^{-9} atm cc/sec He at the diaphragm.

Tescom's PV71 1/4-turn round handle style and PV72 1/4-turn lever style offer easy to read open/close indicators, choice of knob colors, 3000 PSIG (207 bar) maximum operating pressure and a flow capacity of $C_v=.17$ (high flow option of $C_v=.40$, $C_v=.50$ for PV7T). PV7T toggle handle is lockout-tagout ready.

- Valves open under all vacuum conditions
- 5 Ra or 10 Ra microinch surface finishes
- SPC monitoring
- No internal springs
- Precision Electro-Polish (P.E.P.) available
- High flow version available
- Bakeable to 150°C (PCTFE)¹, 204°C (Vespel®)¹

TYPICAL APPLICATIONS

- Point of Use Valves
- Gas Sticks
- Tool Hook-ups
- Process Tools
- Gas Trays

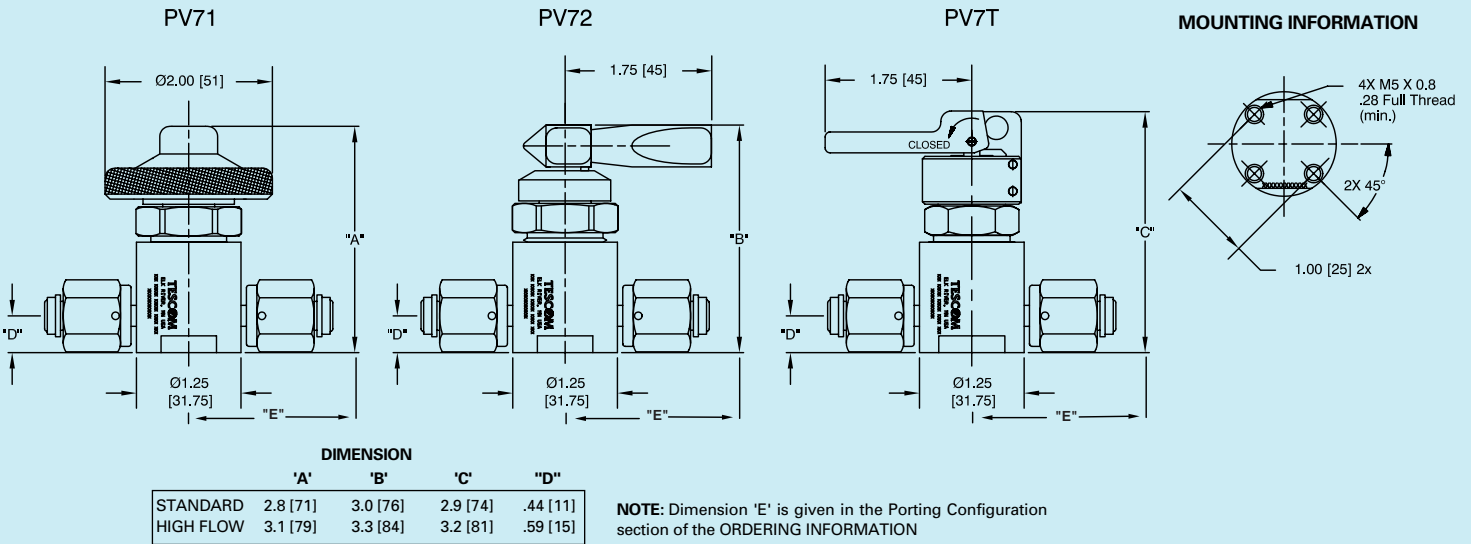
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¹ Baking must be performed with valve in open position.

Teflon® is a registered trademark of DuPont.
Hastelloy® is a registered trademark of Haynes Int'l
Monel® is a registered trademark of Huntington Alloys

ALL DIMENSIONS ARE REFERENCE ONLY



SPECIFICATIONS

FLUID MEDIA – All gases corrosive or non-corrosive that are compatible with materials of construction. For other media, consult factory.*

PRESSURE RATING - Per criteria of ANSI / ASME B31.3.

Model	Actuator Type	Maximum Pressure	Proof Pressure	Cv
PV 71L	1/4 Turn Knob	3000 PSIG	3500 PSIG	.17
PV 72L	1/4 Turn Lever	3000 PSIG	3500 PSIG	.17
PV 71H	1/4 Turn Knob	750 PSIG	1125 PSIG	.40
PV 72H	1/4 Turn Lever	750 PSIG	1125 PSIG	.40
PV7TL	Toggle handle	.125 PSIG	.188 PSIG	.17
PV7TH	Toggle handle	.125 PSIG	.188 PSIG	.50

Materials in contact with media:

Body	316L VAR Stainless Steel
Diaphragm	Elgiloy®
Seat(s)	VespeI® or PCTFE
Remaining parts	316 Stainless Steel
Flow capacity	(see above chart)
Certified maximum inboard leak rate:	
Seat	4 x 10 ⁻⁹ atm cc/sec He
Diaphragm	1 x 10 ⁻⁹ atm cc/sec He
Internal surface finish	.10 R _a or 5 R _a microinch (.25 or .13 micrometer)

Media temperature:

VespeI® seat	-40°F to +350°F (-40°C to +177°C)
PCTFE seat	-40°F to +140°F (-40°C to +60°C)
Weight	PV7T, PV71 and PV72: .75 lbs. (1.7 kg)
Porting	See Ordering Information
Internal volume (1/4" tube, 3.00 end to end)	C _v .17 = 1.72 cc High flow model C _v .4, .5 = 2.40 cc
Wetted surface are (1/4" tube, 3.00 end to end)	C _v .17 = 1.72 cc High flow model C _v .4, .5 = 2.40 cc

WELDED FITTINGS: Tube stubs or VCR® (or compatible) welded to the valve body.

CLEANING: All PV70 Series Valves are DI water electronic grade cleaned. In addition, PV70 Series valves with the Precision Electro-Polish (P.E.P.) are ES 500 Particle Certified.

* Tescom may make suggestions for a material to use with a specific media. These suggestions will be based on technical compatibility resources both through associations and manufacturers. Tescom does not guarantee the material to be compatible with the specific media – this is the responsibility of the user. Users must test under their own operating conditions to determine the suitability of any material in a particular application.

NOTE: Product availability and specifications contained herein are subject to change without notice. Consult local distributor or factory for potential revisions.

ORDERING INFORMATION

EXAMPLE: P V 7 2 L K - 1 0 3 0 - 1 5 9

